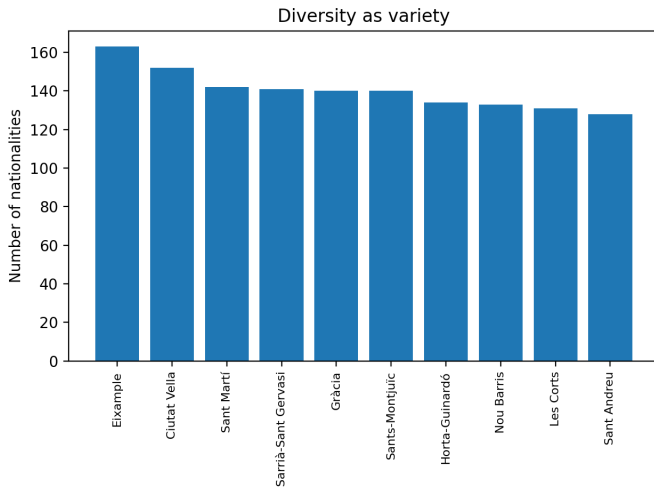# allWomen Tech Assessment

Berta Grimau

Which district is the most diverse?

Diversity as variety (number of nationalities) per district

Not very interesting... All districts have a similar amount of nationalities present (but possibly with only a few people!)
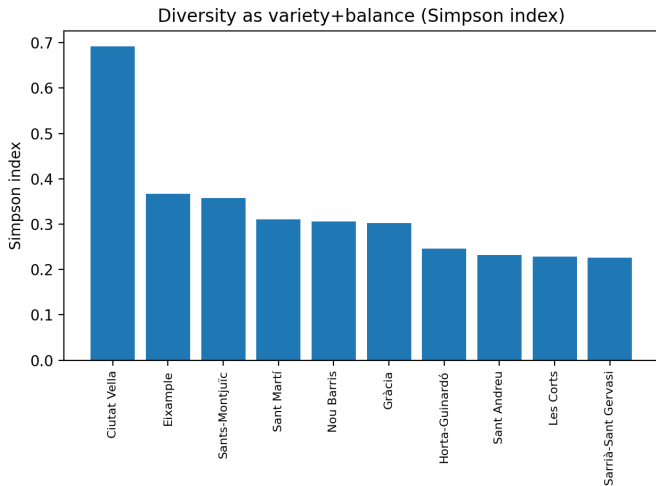

Diversity as variety

Which district is the most diverse?

Diversity as variety+balance per district

Much more interesting! The Simpson index takes into account how many people of each nationality there are (as well as the amount of nationalities).
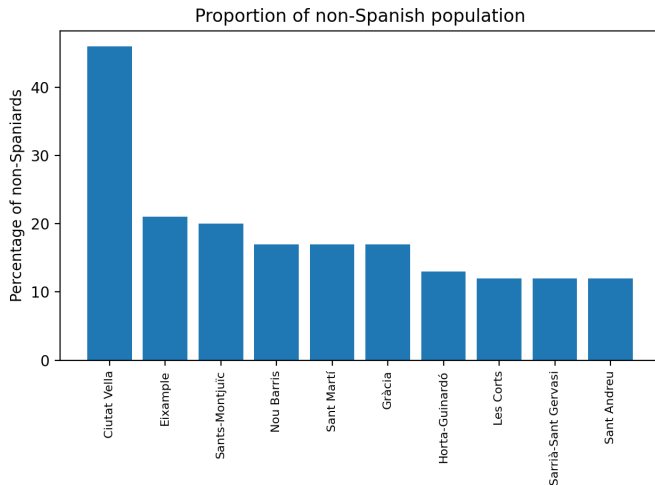
Simpson index $= 1 - \sum_{i=1}^{k} \frac{n_i(n_i-1)}{N(N-1)}$

Diversity as variety+balance (Simpson index)

Which district is the most diverse?
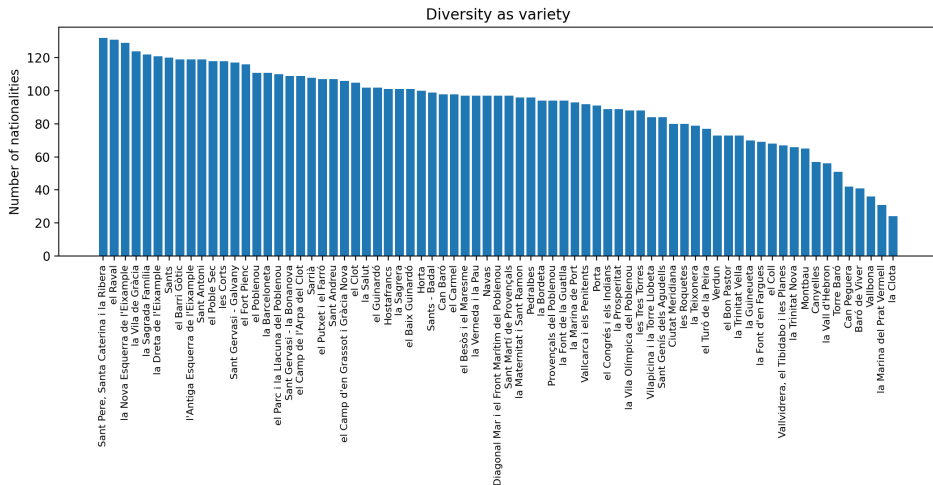
Percentage of non-Spanish residents per district

Also interesting. Conclusion: Ciutat Vella is by far the most diverse neighbourhood and also the one with the most non-Spanish people.

Proportion of non-Spanish population

Which neighborhood is the most diverse?

Diversity as variety per neighborhood

Similarly to the case of districts: not super interesting.

Diversity as variety

Which neighborhood is the most diverse?

Diversity as variety+balance per neighborhood

As before, this is much more illuminating.

Diversity as variety+balance (Simpson index)
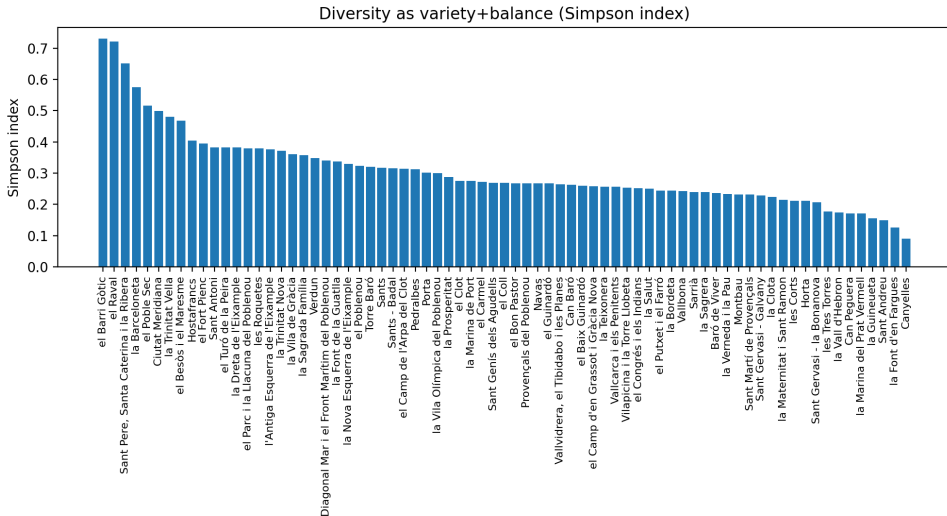
Which neighborhood is the most diverse?

% of non-Spanish residents per neighborhood

Interestingly, the neighborhoods that are the most diverse are those in the city center, followed by three suburban neighbourhoods: Ciutat Meridiana, Trinitat Vella and Besòs i el Maresme.


Proportion of non-Spanish population
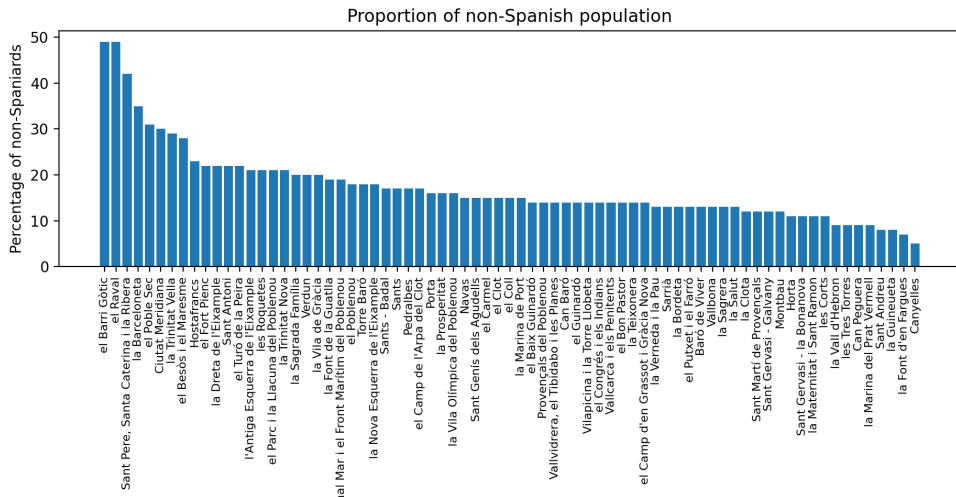
Are there nationalities with a higher concentration of women?

% of women per nationality (for nationalities with more than 5000 people)

There are huge differences among different nationalities. Many central and south American nationalities are amongst those with a higher % of women.
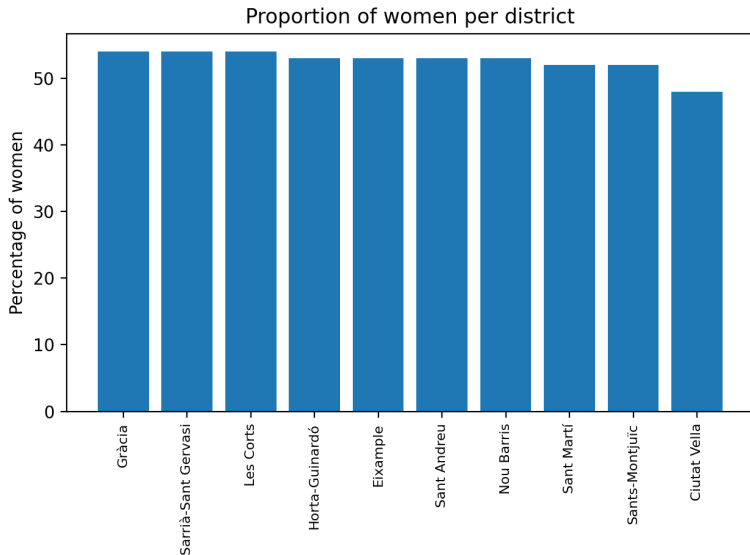

Proportion of women per nationality (only for nationalities with >5000)
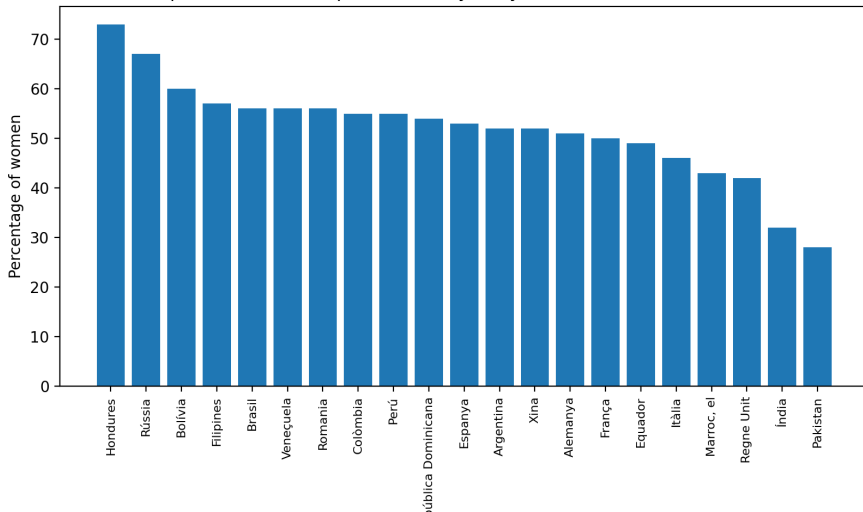
Are there districts with a higher percentage of women?
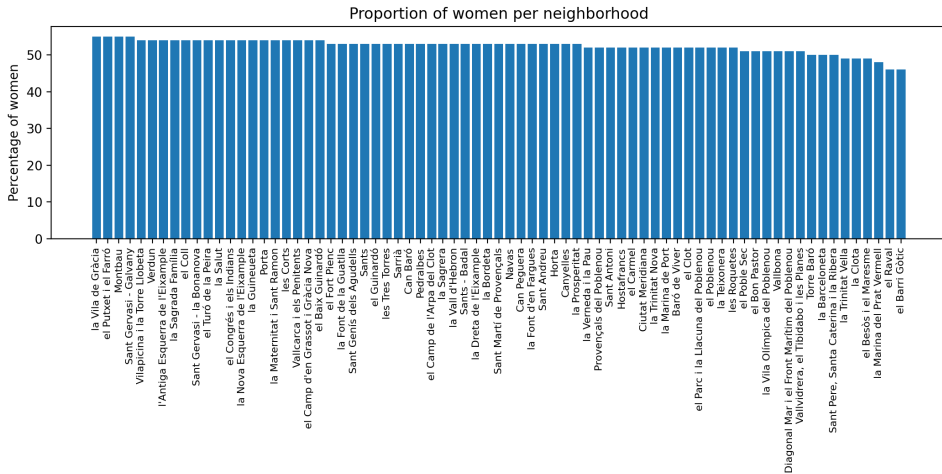
% of women per district

Not very interesting... Women are quite evenly spread across the city.

Proportion of women per district

Are there neighborhoods with a higher percentage of women?

% of women per neighborhood
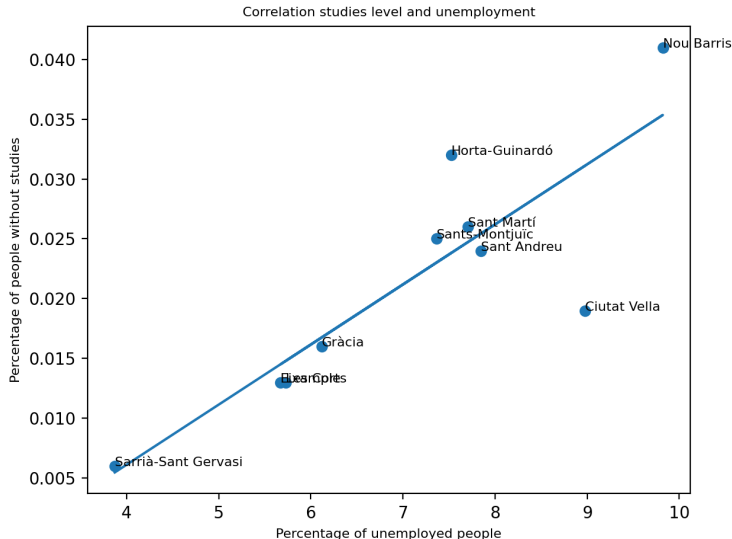
Same.

Proportion of women per neighborhood

Additional study 1: unemployment vs level of studies

% of unemployment vs percentage of people without any studies

Interesting results. The common sense hypothesis that places with more people without studies are also those with higher unemployment levels is confirmed.

Correlation studies level and unemployment

Additional study 1: unemployment vs level of studies

% of unemployment vs percentage of people without any studies

The trend is the same, but here we see that the neighbourhoods with the most people without studies do not have the highest unemployment. Hypothesis: these are 'old' neighbourhoods where those people without studies are mostly retired.
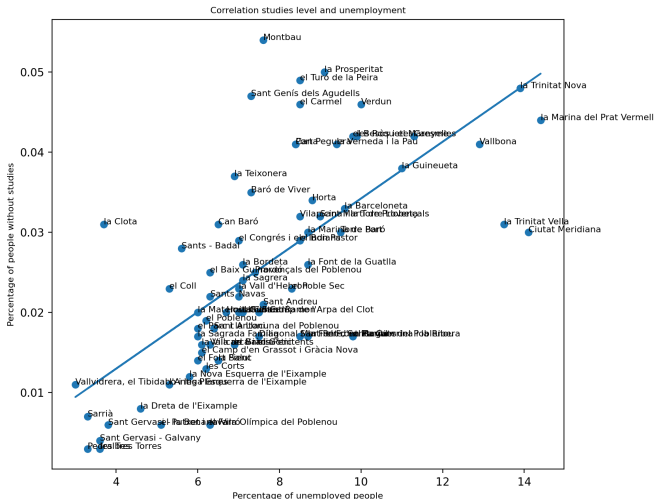
Additional study 2: 'bretxa tecnològica' vs usage of computers/wifi in public libraries

% of people without internet at home vs how much people use computers/wifi in public libraries

Not very interesting. I thought there would be more of a correlation. Possible explanation: the data on the 'bretxa tecnològica' is based on a survey and the survey could be incomplete.

Correlation between lack of internet at home and use of public libraries' wifi/computers
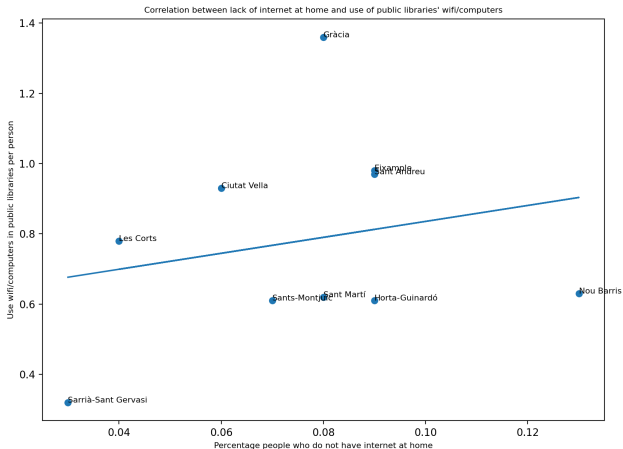
Sources the for last two studies

CSV files from Open Data BCN:

- ‘Pes del atur registrat de la poblaci de 16 a 64 anys de la ciutat de Barcelona’
- ‘Padr d'habitants. Poblaci de la ciutat de Barcelona segons sexe i nivell acadmic’
- ‘Dades de la xarxa de biblioteques de la ciutat de Barcelona’
- ‘Enquesta sobre la bretxa digital a la ciutat de Barcelona’ (it was made in 2020, so it does not match the rest of data, which is all from 2018 – but I assumed it was still significant)